

## § 56.50-90

(13mm) nor more than 1½ inches (38mm) apart. The clear area through the mesh must not be less than the internal unobstructed area of the required pipe.

(9) Where vents are provided with flame screens, the closure device shall be situated so as not to damage these screens.

(10) The diameter of each vent pipe must not be less than 1½ inches nominal pipe size for fresh water tanks, 2 inches nominal pipe size for water ballast tanks, and 2½ inches nominal pipe size for fuel oil tanks, except that small independent tanks need not have a vent more than 25% greater in cross-sectional area than the fill line.

(11)(i) If a tank may be filled by a pressure head exceeding that for which the tank is designed, the aggregate cross-sectional area of the vents in each tank must be not less than the cross-sectional area of the filling line unless the tank is protected by overflows, in which case the aggregate cross-sectional area of the overflows must be not less than the cross-sectional area of the filling line.

(ii) Provision must be made to guard against liquids rising in the venting system to a height that would exceed the design head of a cargo tank or fuel-oil tank. It may be made by high-level alarms or overflow-control systems or other, equivalent means, together with gauging devices and procedures for filling cargo tanks.

(12) Where deep tanks are intended for the occasional carriage of dry or liquid cargo, a “spectacle” or ring and blank flange may be fitted in the overflow pipe so arranged as not to interfere with venting when the tanks contain oil.

(13) Vents from fresh water or water ballast tanks shall not be connected to a common header with vents from oil or oily ballast tanks.

(b) Tank vents must remain within the watertight subdivision boundaries in which the tanks they vent are located. Where the structural configuration of a vessel makes meeting this requirement impracticable, the Marine Safety Center may permit a tank vent to penetrate a watertight subdivision bulkhead. All tank vents which penetrate watertight subdivision bulkheads

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must terminate above the weather deck.

[CGFR 68-82, 33 FR 18843, Dec. 18, 1968, as amended by CGD 77-140, 54 FR 40610, Oct. 2, 1989; CGD 83-043, 60 FR 24774, May 10, 1995; CGD 95-012, 60 FR 48050, Sept. 18, 1995]

### § 56.50-90 Sounding devices.

(a) Each tank must be provided with a suitable means of determining liquid level. Except for a main cargo tank on a tank vessel, each integral hull tank and compartment, unless at all times accessible while the vessel is operating, must be fitted with a sounding pipe.

(b) Where sounding pipes terminate below the freeboard deck on cargo vessels, they shall be fitted with gate valves. On passenger vessels, where sounding pipes terminate below the bulkhead deck, they shall be fitted with self-closing gate valves.

(c) Except as allowed by this paragraph, on each vessel constructed on or after June 9, 1995, no sounding pipe used in a fuel-oil tank may terminate in any space where the risk of ignition of spillage from the pipe might arise. None may terminate in a space for passengers or crew. When practicable, none may terminate in a machinery space. When the Commanding Officer, Marine Safety Center, determines it impracticable to avoid terminating a pipe in a machinery space, a sounding pipe may terminate in a machinery space if all the following requirements are met:

(1) In addition to the sounding pipe, the fuel-oil tank has an oil-level gauge complying with paragraph (d) of this section.

(2) The pipe terminates in a place remote from ignition hazards unless precautions are taken such as fitting an effective screen (shield) to prevent the fuel oil, in case of spillage through the end of the pipe, from coming into contact with a source of ignition.

(3) The end of the pipe is fitted with a self-closing blanking device and a small-diameter, self-closing control cock located below the blanking device for the purpose of ascertaining before the blanking device is opened that no fuel oil is present. Provision must be made to ensure that no spillage of fuel oil through the control cock involves an ignition hazard.

(d) On each vessel constructed on or after June 9, 1995, other oil-level gauges may be used instead of sounding pipes if all the following requirements are met:

(1) In a passenger vessel, no such gauge may require penetration below the top of the tank, and neither the failure of a gauge nor an overfilling of the tank may permit release of fuel into the space.

(2) In a cargo vessel, neither the failure of such a gauge nor an overfilling of the tank may permit release of fuel into the space. The use of cylindrical gauge-glasses is prohibited. The use of oil-level gauges with flat glasses and self-closing valves between the gauges and fuel tanks is acceptable.

(e) The upper ends of sounding pipes terminating at the weather deck shall be closed by a screw cap or plug. Great Lakes dry cargo carriers may have the sounding pipes which service ballast water tanks terminate at least 4 inches above the deck if closure is provided by a tight fitting hinged cover making metal-to-metal contact with the hinge on the forward side. Positive means to secure these caps in the closed position shall be provided. Provision shall be made to prevent damage to the vessels' plating by the striking of the sounding rod.

(f) On mobile offshore drilling units where installation of sounding pipes may not be practicable for some tanks, alternate means of determining liquid level may be used if approved by the Commandant.

[CGFR 68-82, 33 FR 18843, Dec. 18, 1968, as amended by CGD 73-251, 43 FR 56800, Dec. 4, 1978; CGD 83-043, 60 FR 24774, May 10, 1995; CGD 95-028, 62 FR 51201, Sept. 30, 1997]

#### **§ 56.50-95 Overboard discharges and shell connections.**

(a)(1) All inlets and discharges led through the vessel's side shall be fitted with efficient and accessible means, located as close to the hull penetrations as is practicable, for preventing the accidental admission of water into the vessel either through such pipes or in the event of fracture of such pipes.

(2) The number of scuppers, sanitary discharges, tank overflows, and other similar openings in the vessel's side shall be reduced to a minimum, either

by making each discharge serve for as many as possible of the sanitary and other pipes, or in any other satisfactory manner.

(3) In general, when the bulkhead deck is above the freeboard deck, the requirements of this section apply relative to the bulkhead deck. For vessels not assigned load lines, such as certain inland vessels and barges, the weather deck shall be taken as the freeboard deck.

(b)(1) Scuppers and discharge pipes originating at any level and penetrating the shell either more than 17½ inches (450mm) below the freeboard deck or less than 23½ inches (600mm) above the summer load waterline must be provided with an automatic nonreturn valve at the shell. This valve, unless required by paragraph (b)(2) of this section, may be omitted if the piping is not less than Schedule 80 in wall thickness for nominal pipe sizes through 8 inches, Schedule 60 for nominal pipe sizes above 8 inches and below 16 inches, and Schedule 40 for nominal pipe sizes 16 inches and above.

(2) Discharges led through the shell originating either from spaces below the freeboard deck or from within enclosed superstructures and equivalent deckhouses on the freeboard deck as defined in § 42.13-15(i) of subchapter E (Load Lines) of this chapter, shall be fitted with efficient and accessible means for preventing water from passing inboard. Normally each separate discharge shall have one automatic nonreturn valve with a positive means of closing it from a position above the freeboard deck. Where, however, the vertical upward distance from the summer load line to the inboard end of the discharge pipe through which flooding can take place exceed 0.01L, the discharge may have two automatic nonreturn valves without positive means of closing, provided that the inboard valve is always accessible for examination under service conditions. Where that vertical distance exceeds 0.02L a single automatic nonreturn valve without positive means of closing is acceptable. In an installation where the two automatic nonreturn valves are used, the inboard valve must be above the tropical load line. The means for operating the positive action valve shall be